

# SEQUENCE LISTING

<110> Ensoli, Barbara

<120> HIV-1 TAT, OR DERIVATIVES THEREOF FOR  
PROPHYLACTIC AND THERAPEUTIC VACCINATION

<130> 11340-003-999

<140> 09/555,534

<141> 2000-05-31

<150> PCT/EP98/07721

<151> 1998-11-30

<150> RM97A000743

<151> 1997-12-01

<160> 36

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 261

<212> DNA

<213> AIDS-associated retrovirus

<220>

<221> CDS

<222> (1)...(261)

<223> Wild type tat

<400> 1

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Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser	
1 5 10 15	
cag cct aaa act gct tgt acc aat tgc tat tgt aaa aag tgt tgc ttt	96
Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe	
20 25 30	
cat tgc caa gtt tgt ttc ata aca aaa gcc tta ggc atc tcc tat ggc	144
His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly	
35 40 45	
agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act	192
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr	
50 55 60	
cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc cga ggg gac	240
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp	
65 70 75 80	
ccg aca ggc ccg aag gaa tag	261
Pro Thr Gly Pro Lys Glu *	
85	

<210> 2

<211> 86

<212> PRT  
 <213> AIDS-associated retrovirus

<400> 2  
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 1 5 10 15  
 Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe  
 20 25 30  
 His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly  
 35 40 45  
 Arg Lys Lys Arg Arg Gln Arg Arg Pro Pro Gln Gly Ser Gln Thr  
 50 55 60  
 His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp  
 65 70 75 80  
 Pro Thr Gly Pro Lys Glu  
 85

<210> 3  
 <211> 261  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> CDS  
 <222> (1)...(261)  
 <223> Cys22 tat

<400> 3  
 atg gag cca gta gat cct aga cta gag ccc tgg aag cat cca gga agt 48  
 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser  
 1 5 10 15  
 cag cct aaa act gct ggt acc aat tgc tat tgt aaa aag tgt tgc ttt 96  
 Gln Pro Lys Thr Ala Gly Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe  
 20 25 30  
 cat tgc caa gtt tgt ttc ata aca aaa gcc tta ggc atc tcc tat ggc 144  
 His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly  
 35 40 45  
 agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act 192  
 Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr  
 50 55 60  
 cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc cga ggg gac 240  
 His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp  
 65 70 75 80  
 ccg aca ggc ccg aag gaa tag 261  
 Pro Thr Gly Pro Lys Glu \*  
 85

<210> 4  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Cys22 tat

<400> 4  
 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser  
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 Gln Pro Lys Thr Ala Gly Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe  
           20                  25                  30  
 His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly  
           35                  40                  45  
 Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr  
       50                  55                  60  
 His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp  
 65                  70                  75                  80  
 Pro Thr Gly Pro Lys Glu  
                   85

<210> 5  
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<220>  
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 <222> (1)...(261)  
 <223> Lys41 tat

<400> 5  
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   1                  5                  10                  15  
  
 cag cct aaa act gct tgt acc aat tgc tat tgt aaa aag tgt tgc ttt 96  
 Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe  
           20                  25                  30  
  
 cat tgc caa gtt tgt ttc ata aca aca gcc tta ggc atc tcc tat ggc 144  
 His Cys Gln Val Cys Phe Ile Thr Thr Ala Leu Gly Ile Ser Tyr Gly  
           35                  40                  45  
  
 agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act 192  
 Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr  
       50                  55                  60  
  
 cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc cga ggg gac 240  
 His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp  
   65                  70                  75                  80  
  
 ccg aca ggc ccg aag gaa tag 261  
 Pro Thr Gly Pro Lys Glu \*  
                   85

<210> 6  
 <211> 86  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Lys41 tat

<400> 6

Met	Glu	Pro	Val	Asp	Pro	Arg	Leu	Glu	Pro	Trp	Lys	His	Pro	Gly	Ser
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Gln	Pro	Lys	Thr	Ala	Cys	Thr	Asn	Cys	Tyr	Cys	Lys	Lys	Cys	Cys	Phe
			20					25					30		
His	Cys	Gln	Val	Cys	Phe	Ile	Thr	Thr	Ala	Leu	Gly	Ile	Ser	Tyr	Gly
		35					40					45			
Arg	Lys	Lys	Arg	Arg	Gln	Arg	Arg	Arg	Pro	Pro	Gln	Gly	Ser	Gln	Thr
	50					55					60				
His	Gln	Val	Ser	Leu	Ser	Lys	Gln	Pro	Thr	Ser	Gln	Ser	Arg	Gly	Asp
65					70					75					80
Pro	Thr	Gly	Pro	Lys	Glu										
				85											

<210> 7  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> CDS  
 <222> (1)...(252)  
 <223> RGD tat

atg gag cca gta gat cct aga cta gag ccc tgg aag cat cca gga agt															48
Met	Glu	Pro	Val	Asp	Pro	Arg	Leu	Glu	Pro	Trp	Lys	His	Pro	Gly	Ser
1				5					10					15	
cag cct aaa act gct tgt acc aat tgc tat tgt aaa aag tgt tgc ttt															96
Gln	Pro	Lys	Thr	Ala	Cys	Thr	Asn	Cys	Tyr	Cys	Lys	Lys	Cys	Cys	Phe
			20					25					30		
cat tgc caa gtt tgt ttc ata aca aaa gcc tta ggc atc tcc tat ggc															144
His	Cys	Gln	Val	Cys	Phe	Ile	Thr	Lys	Ala	Leu	Gly	Ile	Ser	Tyr	Gly
		35					40					45			
agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act															192
Arg	Lys	Lys	Arg	Arg	Gln	Arg	Arg	Arg	Pro	Pro	Gln	Gly	Ser	Gln	Thr
	50					55					60				
cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc ccg aca ggc															240
His	Gln	Val	Ser	Leu	Ser	Lys	Gln	Pro	Thr	Ser	Gln	Ser	Pro	Thr	Gly
65					70					75					80
ccg aag gaa tag															252
Pro	Lys	Glu	*												

<210> 8  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> RGD tat

atg gag cca gta gat cct aga cta gag ccc tgg aag cat cca gga agt															
Met	Glu	Pro	Val	Asp	Pro	Arg	Leu	Glu	Pro	Trp	Lys	His	Pro	Gly	Ser
1				5					10					15	



His	Cys	Gln	Val	Cys	Phe	Ile	Thr	Thr	Ala	Leu	Gly	Ile	Ser	Tyr	Gly
		35					40					45			
Arg	Lys	Lys	Arg	Arg	Gln	Arg	Arg	Arg	Pro	Pro	Gln	Gly	Ser	Gln	Thr
	50					55					60				
His	Gln	Val	Ser	Leu	Ser	Lys	Gln	Pro	Thr	Ser	Gln	Ser	Pro	Thr	Gly
65					70					75					80
Pro	Lys	Glu													

<210> 11  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic peptide corresponding to regions of Tat or of other viral products or of cytokines used as immunogen

Met	Glu	Pro	Val	Asp	Pro	Arg	Leu	Glu	Pro	Trp	Lys	His	Pro	Gly	Ser
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Gln	Pro	Lys	Thr												
			20												

<210> 12  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic peptide corresponding to regions of Tat or of other viral products or of cytokines used as immunogen

Ala	Cys	Thr	Asn	Cys	Tyr	Cys	Lys	Lys	Cys	Cys	Phe	His	Cys	Gln	Val
1				5					10					15	
Cys	Phe	Ile	Thr												
			20												

<210> 13  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic peptide corresponding to regions of Tat or of other viral products or of cytokines used as immunogen

Gln	Val	Cys	Phe	Ile	Thr	Lys	Ala	Leu	Gly	Ile	Ser	Tyr	Gly	Arg	Lys
1				5					10					15	

<210> 14  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic peptide corresponding to regions of Tat or of  
 other viral products or of cytokines used as immunogen

<400> 14  
 Ser Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln  
 1 5 10 15

<210> 15  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic peptide corresponding to regions of Tat or of  
 other viral products or of cytokines used as immunogen

<400> 15  
 Arg Pro Pro Gln Gly Ser Gln Thr His Gln Val Ser Leu Ser Lys Gln  
 1 5 10 15

<210> 16  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic peptide corresponding to regions of Tat or of  
 other viral products or of cytokines used as immunogen

<400> 16  
 His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp  
 1 5 10 15

<210> 17  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic peptide corresponding to regions of Tat or of  
 other viral products or of cytokines used as immunogen

<400> 17  
 Pro Thr Ser Gln Ser Arg Gly Asp Pro Thr Gly Pro Lys Glu  
 1 5 10

<210> 18  
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 <212> DNA  
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<220>  
 <223> Forward Rev. primer

<400> 18  
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15

<210> 19  
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 <212> DNA  
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 <220>  
 <223> Reverse Rev. primer  
  
 <400> 19  
 ctattcttta gttcc 15  
  
 <210> 20  
 <211> 15  
 <212> DNA  
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 <220>  
 <223> Forward Nef. primer  
  
 <400> 20  
 atgggtggca agtgg 15  
  
 <210> 21  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Reverse Nef. primer  
  
 <400> 21  
 tcagcagtcc ttgta 15  
  
 <210> 22  
 <211> 15  
 <212> DNA  
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 <223> Forward Gag. primer  
  
 <400> 22  
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 <210> 23  
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 <210> 24  
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 <212> DNA  
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<220>  
 <223> Forward IL-12 primer  
  
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 <211> 15  
 <212> DNA  
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 <223> Reverse IL-12 primer  
  
 <400> 25  
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 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Forward IL-15 primer  
  
 <400> 26  
 atgagaattt cgaaa 15  
  
 <210> 27  
 <211> 15  
 <212> DNA  
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 <220>  
 <223> Reverse IL-15 primer  
  
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 <210> 28  
 <211> 15  
 <212> DNA  
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 <223> Forward Tat primer  
  
 <400> 28  
 atggagccag tagat 15  
  
 <210> 29  
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 <212> DNA  
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 <220>  
 <223> Reverse Tat primer  
  
 <400> 29  
 ctattccttc gggcc 15

<210> 30  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Forward Tat/Rev primer  
  
 <400> 30  
 ggcccgaagg aaatggcagg aagaagc 27  
  
 <210> 31  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Forward Tat/Nef primer  
  
 <400> 31  
 ggcccgaagg aaatgggtgg caagtgg 27  
  
 <210> 32  
 <211> 28  
 <212> DNA  
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 <220>  
 <223> Forward Tat/Gag primer  
  
 <400> 32  
 ggccctgaag gaaatgggtg cgagagcg 28  
  
 <210> 33  
 <211> 27  
 <212> DNA  
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 <223> Forward Tat/IL-12 primer  
  
 <400> 33  
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 <210> 34  
 <211> 27  
 <212> DNA  
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 <400> 34  
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 <210> 35  
 <211> 24  
 <212> DNA  
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<223> Primer SG1096Ngag

<400> 35

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24

<210> 36

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer SG1592 CgagD

<400> 36

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24